

Discussion

Ryegrass varieties and experimental strains were evaluated for forage production during the 2001- 2002 season at the Ardmore Pasture Demonstration Farm (Table 1). The test included 49 ryegrasses and three rescuegrass-type brome grasses.

The fall and winter parts of the growing season were not favorable for high forage yields. The normal planting date of mid-September was delayed because of wet soil conditions. After early October rains, it became relatively dry until mid-December. Production was again slowed by dry weather from late December through mid-March and by cold temperatures in late February and early March. Leaf tip freeze damage was evident in all ryegrass entries. However, no actual winterkill occurred. The first forage harvest was delayed until early April. Mild temperatures and good rainfall in April resulted in excellent growth, but a hot, dry period in May again slowed growth and resulted in no regrowth after the May 24 harvest. In summarizing the growing season, the early maturing cultivars were penalized because of the circumstances during the first half of the season, and the late maturing types probably did not reach their genetic yield potential in the latter part of the season.

Forage was harvested only three times during the spring phase of the growing season (Table 1). This year's overall production average of 4,308 pounds per acre was the lowest since testing was initiated on the Pasture Demonstration Farm in 1994-95. Overall, 42 percent of the total forage was harvested on April 5. "Ed" and "Brigadier" were the earliest cultivars in the test, while "Marshall" produced the most forage on the last harvest date (May 24).

Table 2 summarizes the total forage production of common entries that have been evaluated over the last three seasons. The 2001-2002 average total yield was about 29 percent lower than that of the previous year. The varieties that rank consistently high each year are those that should be given top consideration by producers in southern Oklahoma and northern Texas when making planting decisions.

Ryegrass is often used in mixtures with rye and other small grains. Ryegrass is also used extensively in bermudagrass and bahiagrass overseeding and in volunteer pastures. Use ryegrass cautiously in wheat and other grain-producing enterprises because it can become weedy, much like wild oats and cheat. It usually volunteers to a good stand and will compete with wheat and other grains.

Table 2. Ryegrass forage performance summary, 1999-2002; Ardmore, Oklahoma

Variety or Strain	Pounds of oven-dry forage per acre			Three-Year Avg. (1999-2002)	Common Annual (%)
	1999-2000	2000-2001	2001-2002		
ME 94	8,406 (3) ¹	6,960 (3)	5,092 (3)	6,819	110
Marshall	7,902 (8)	6,661 (8)	5,855 (1)	6,806	110
Stampe de	8,650 (2)	7,047 (2)	4,588 (8)	6,762	109
King	8,281 (5)	6,685 (7)	4,992 (4)	6,653	108
Ed	8,310 (4)	6,323 (12)	5,142 (2)	6,592	107
Jackson	7,975 (6)	6,619 (9)	4,966 (5)	6,520	106
Jumbo	7,819 (9)	6,836 (6)	4,451 (10)	6,369	103
Rio	7,921 (7)	6,425 (11)	4,664 (7)	6,337	103
Matua brome grass	9,110 (1)	5,336 (13)	4,532 (9)	6,326	102
Tam 90	7,359 (13)	6,516 (10)	4,941 (6)	6,272	101
Big Daddy	7,440 (12)	7,317 (1)	4,014 (12)	6,257	101
Ribeye	7,446 (11)	6,844 (5)	4,383 (11)	6,224	101
Common Annual	7,719 (10)	6,944 (4)	3,877 (13)	6,180	100
Average					
	8,026	6,655	4,731	6,471	105
L.S.D.² (.05)					
	1,117	1,064	1,204		

The number in parentheses is the rank within year.

¹Least significant difference.

Some Influencing Factors

Planting date: October 4, 2001

Location: Pasture Demonstration Farm, Ardmore, Oklahoma.

Seeding rate: Ryegrass: 25 pounds per acre; brome grass: 35 pounds per acre.

Seeding method: Drilled in 7-inch rows and planted at a 1/2-inch depth.

Replications: Four.

Soil type: Chickasha loam.

Management: Swept, disked and roller-harrowed.

Fertilization: Preplant – 50 pounds N and 30 pounds K₂O per acre on August 21, 2001; topdress – 50 pounds of N per acre on February 14, 2002.

Clipping: Clipped with a sickle mower (Hege Forage Plot Harvester) at a height of 2 1/2 to 3 inches to simulate rotational grazing.

Winter damage: There was considerable leaf tip freeze damage following hard freezes in late February and early March. The damage appeared to be uniformly similar for all rye grass entries in the test.

Temperature: The low temperature was 11°F on January 3, February 27, and March 3.

Temperatures were 20 °F or lower on eight dates.

Temperature Data

Date	Minimum Temperature (°F)	Date	Minimum Temperature (°F)
December 31	19	February 27	11
January 2	17	March 2	16
January 3	11	March 3	11
February 26	19	March 4	18

Rainfall (Inches):

Month	36-year Average	2000-2001 Season	2001-2002 Season
	September	4.40	2.00
October	4.37	13.31	5.08
November	2.48	6.24	0.98
December	2.16	2.69	2.74
January	1.72	2.93	1.05
February	2.06	5.52	0.94
March	3.27	0.69	4.07
April	3.55	1.99	6.50
May	5.30	5.26	3.03
Total	29.31	40.63	36.35

Information in this report is not conclusive, but should be of great assistance when used with similar information from other sources.

All available information pertaining to the subject should be used in making conclusions and decisions. This publication is intended to furnish supplemental information to aid with decision making and idea formation.

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2001-2002 FORAGE YIELDS from Ryegrass Varieties and Strains

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Table 1. Ryegrass forage performance, 2001-2002; Pasture Demonstration Farm, Ardmore, Oklahoma

Variety or Strain	Clipping dates			2001-2002 Total	Common Annual (%)
	4/5	4/23	5/24		
Pounds of oven-dry forage per acre					
Marshall	2,324	1,393	2,138	5,855	151
FL X2001 (LA) LRCT	2,300	1,389	1,553	5,242	135
Passerel Plus	2,362	1,697	1,146	5,205	134
Ed	2,639	1,329	1,174	5,142	133
ME 94	2,333	1,663	1,096	5,092	131
Brigadier	2,628	1,257	1,113	4,998	129
King	2,353	1,316	1,323	4,992	129
Jackson	2,481	1,430	1,055	4,966	128
Tam 90	2,166	1,610	1,165	4,941	127
FL X2001 (New) TX MR	1,811	1,453	1,581	4,845	125
FL X2001 (New) 4X Mid-Late	1,954	1,180	1,560	4,694	121
DH-3	2,309	1,047	1,335	4,691	121
Rio	2,328	1,247	1,089	4,664	120
CAS-EM227	2,332	1,116	1,163	4,611	119
BB-Mex-1	1,666	1,279	1,649	4,594	118
Stampede	2,128	1,460	999	4,587	118
Prine	2,018	1,357	1,212	4,587	118
WD-40	1,977	1,341	1,269	4,587	118
FL X2001 (New) 4X LR Late	1,754	1,518	1,294	4,566	118
Matua bromegrass	1,414	2,001	1,117	4,532	117
TXR 2001-10	2,123	1,181	1,227	4,531	117
WVPB-AR-99-L	1,777	1,534	1,185	4,496	116
SCH-2	2,207	1,311	956	4,474	115
Jumbo	1,851	1,512	1,088	4,451	115
SCH-5	2,043	1,471	889	4,403	114
Magnum	1,724	1,338	1,330	4,392	113
Ribeye	1,860	1,297	1,226	4,383	113
Abundant	1,870	1,203	1,290	4,363	113
Magnolia Select	2,049	1,083	1,167	4,299	111
TXR 2001-9	1,709	1,600	985	4,294	111
Beefbuilder III	1,818	1,294	1,056	4,168	108
01-ORETAR	1,449	1,316	1,362	4,127	106
AGRBW 101 bromegrass	1,256	1,717	1,137	4,110	106
Big Daddy	1,516	1,538	960	4,014	104
DSV417 bromegrass	1,034	1,831	1,145	4,010	103
FSG-585	1,619	1,065	1,324	4,008	103
CIS FL1995 x 4NLS	1,401	1,318	1,282	4,001	103
TXR 2000-T1	1,542	1,371	985	3,898	101
FL/OK 2001 (New1) LRCT	1,744	1,387	756	3,887	100
Common Annual	1,568	1,148	1,161	3,877	100
FL/NE 2001 (New1) LRCT	1,496	1,193	1,167	3,856	99
FL 2001 (G) 4X ER	1,596	1,402	825	3,823	99
Aurelia	1,585	1,257	880	3,722	96
Adin	1,447	1,223	1,034	3,704	96
Bartali	1,189	1,204	1,275	3,668	95
Joe-1	1,324	1,236	1,010	3,570	92
Monarque	1,252	1,346	954	3,552	92
AGRLM 109	1,260	1,123	1,130	3,513	91
Zorro	1,354	994	1,107	3,455	89
Hellen	1,144	1,061	1,104	3,309	85
Tetrelite II	921	1,225	1,109	3,255	84
AGRLM 106	879	975	1,136	2,990	77
Average					
	1,786	1,343	1,178	4,308	111
L.S.D. ¹ (.05)					
	886	357	NS ³	1,215	
C.V. ² (%)					
	35.5	19.0	38.2	20.2	

¹Least significant difference.²Coefficient of variation.³Nonsignificant